



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 08-0296996

**THE APPLICATION OF APACHE CORPORATION TO AMEND FIELD RULES FOR
THE THREE BAR (SAN ANDRES) FIELD, ANDREWS COUNTY, TEXAS**

HEARD BY: Karl Caldwell – Technical Examiner
Randall Collins – Administrative Law Judge

HEARING DATE: July 15, 2015
CONFERENCE DATE: September 15, 2015

APPEARANCES: **REPRESENTING:**

APPLICANT: Apache Corporation

Thomas Richter, P.E.
Madeleine Hopkins
Sherene Starr
Jeffrey Knight
Ryan Thompson
Lindsay Hefton
Sean Murray
Alicia Fulton

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Apache Corporation (Apache) requests to amend the field rules for the Three Bar (San Andres) Field, Andrews County, Texas. The current field rules are summarized as follows:

1. Designated interval from 4,400 feet to 4,450 feet as shown on the Minihan Oil & Gas MPS University Well No. 5, as a single reservoir for proration purposes;

2. 330' – 660' well spacing (lease line – between well);
3. 40 acre oil density units with a maximum diagonal of 2,100', 20 acre optional density with 10 acre tolerance, maximum diagonal of 1,500'; and
4. Allocation formula based on 100% acreage.

Apache proposes the following field rule amendments:

- Rule 1: Field Interval: propose to designate the entire San Andres interval from 4,254' (TVD) to 5,328' (TVD) as shown on the log for the well with API No. 003-34224 as a single reservoir for proration purpose, to be known as the Three Bar (San Andres) Field;¹
- Rule 2: Spacing: Amend the well spacing to 330' – 0' (lease-line – between well), provide rules for the spacing of horizontal wells, including defining penetration point, terminus, and take point parameters, non-perforation zones (NPZ's), off-site penetration point notice requirements, and a box rule for horizontal drainholes;
- Rule 3: Proration Unit density: Amend Rule 3 to remove the maximum diagonal in the field, add a requirement to file Form P-15, and remove all maximum diagonal limitations. Add a provision for administrative Rule 38 exceptions through a written 21 day notification to affected parties; and
- Rule 4: Allowable: no change.

By letter, dated August 13, 2015, and received on August 14, 2015, Apache withdrew its' proposed administrative Rule 38 rule provision in the proposed field rules. The application is unopposed and the Examiners recommend approval of the request to amend the field rules for the Three Bar (San Andres) Field, Andrews County, Texas.

DISCUSSION OF THE EVIDENCE

The Three Bar (San Andres) Field was discovered on August 20, 1960 by completion of the Eastland Drilling Co. University "5", Well No. 1. Temporary field rules were adopted on January 6, 1998 in Final Order No. 08-0217778. The field rules for the Three Bar (San Andres) Field were made permanent on June 22, 1999 in Final Order

¹ The original notice of hearing dated June 12, 2015 did not propose any change to the correlative interval for the field. By letter, dated July 8, 2015, Apache informed all operators in the field of the proposed amendment to the correlative interval with a 15-day notice to notify the Commission of any objection to the proposed change to the correlative interval. No protests were received within the 15-day period.

No. 08-0221725. Later, the field rules were amended on July 22, 2004 in Final Order No. 08-0238614. The primary purpose of Apache's request to amend the current field rules is to accommodate the drilling and completion of horizontal wells.

The Three Bar (San Andres) Field overlies the Three Bar (Wichita) Field and Apache is requesting to amend the field rules for the Three Bar (San Andres) Field to be more similar to the field rules for the underlying Three Bar (Wichita) Field. Apache also proposes to designate the entire San Andres Formation to be the correlative interval for the Three Bar (San Andres) Field. The proposed interval is between 4,254 feet and 5,328 feet (TVD) as shown on the log for the M.O. Olds, Well No. 2 (API No. 42-003-34224).

Apache completed a horizontal well, the Carmichael SA, Well No. 1H on December 1, 2014 in 20 hydraulically fracture-stimulated stages. The initial potential was 198 BOPD, 142 Mcf gas per day, and 142 BWPD, at a pumping gas:oil ratio (GOR) of 717. The current daily production for this well is 162 BOPD, 132 Mcf gas per day, and 1,500 BWPD. To-date, the cumulative production for the well is 39,000 BO, and 27 MMcf gas. The EUR for the well is 125,000 BO.

The Carmichael SA, Well No. 1H required a Statewide Rule 37 exception due to the penetration point for the horizontal well being too close to a lease line. Apache received a signed waiver from Sheridan, the offset operator. The current field rules require the surface location for horizontal wells to be on-lease, and the first take point must be a minimum of 330 feet from all lease-lines. Apache showed that the drilling of a horizontal well with the surface location required to be on-lease results in the first take point being approximately 500 feet from the lease line due to the footage required to build the curve to penetrate the correlative interval for the field. Apache proposes to adopt a field rule that provides for an off-lease surface location and penetration point. The proposed rule has been previously adopted in other fields where horizontal well development is occurring, including the Three Bar (Wichita) Field. Apache is also requesting to adopt dual lease-line spacing rules for first and last take points along a horizontal drainhole of 100 feet - 330 feet perpendicular. This rule has also been adopted in previous fields, including the Three Bar (Wichita) Field. Apache estimates that the proposed off-lease surface location and penetration point, along with dual lease-line spacing would result in adding an incremental 630 feet of lateral to be completed in the correlative interval per well. At 35 BOE per foot of lateral this would result in an additional 22 MBOE per well. Apache is also requesting to amend the between well-spacing in the field from 660 feet to no minimum between well spacing, will provide operators flexibility in drilling horizontal wells targeting reserves that were not recovered by existing vertical wells the field.

The current field rules require operators to file certified plats which shall set out distinctly all pertinent details in the determination of acreage claimed for each well. Apache is requesting to amend the field rules to require operators to file Form P-15 for

the determination of acreage credit, with the filing of proration unit plats for individual wells in the field to be optional. Operators shall file Form P-15 for each well, and shall list the number of acres that are being assigned to each well on the lease or unit.

FINDINGS OF FACT

1. Notice of this hearing was provided to all operators in the field at least ten (10) days' prior to the date of the hearing and no protests were received.
2. A letter detailing a proposal to amend the correlative interval for the Three Bar (San Andres) Field was sent to all operators in the field on August 13, 2015 with a 15-day period to object to the proposed amendment of the correlative interval for the field and no protests were received.
3. Amending the field rules to require operators to file Form P-15 for the determination of acreage credit in the field and filing a plat of the lease, unit or property that does not require showing individual proration units on said plat will not harm correlative rights.
4. Adopting field rules that provide for an off-lease surface location, off-lease penetration point, dual-lease-line spacing and no minimum between well spacing has the potential to add an incremental 630 feet of lateral to be completed in the correlative interval for the field.
5. Completing an additional 630 feet of lateral in the correlative interval for the field at 35 BOE per foot of lateral will result in an additional 22 MBOE of oil recovered per lateral.
6. Amending the correlative interval will not harm correlative rights.


CONCLUSIONS OF LAW

1. Proper notice was issued as required by all applicable statutes and regulatory codes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Three Bar (San Andres) Field will prevent waste and will not harm correlative rights.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Commission amend the field rules for the Three Bar (San Andres) Field.

Respectfully submitted,


Karl Caldwell
Technical Examiner


Randall Collins
Administrative Law Judge